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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/727,464

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Gal Ben David

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09/16/2009

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EXAMINER

RAMIREZ, JOHN FERNANDO

ART UNIT

PAPER NUMBER

3737

MAIL DATE

DELIVERY MODE

09/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/727,464

Applicant(s)

DAVID ET AL.

Examiner

JOHN F. RAMIREZ

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 17, 23, 26-28, 34, 37-40, 46, 49, 62, 63, 72, 77, 122 and 133-150 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 27, 38, 39, 62, 77, 122, 133, 134, 140 and 146-148 is/are rejected.
- 7) ☒ Claim(s) 17, 23, 26, 28, 34, 37, 40, 46, 49, 63 and 72 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/31/09; 06/04/09; 07/04/09; 12/27/08.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8, 17, 23, 16-28, 34, 37-40, 46, 49, 62, 63, 72, 77, 122 and 133-147 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16, 85, 86, 92-94, 134-138, 140-144, 158-162, 170-174, 200-204, 218-222, 230-234, and 256-311 of copending Application No. 10/343,792.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications merely claim alternate groupings and obvious variations of the same elements and steps.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 27, 38, 39, 62, 77, 122, and 133-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madden et al. (US Patent No. 6,135,955) of record, in view of Bloch et al., of record, (*Application of Computerized Tomography to Radiation Therapy and Surgical Planning. Proceedings of the IEEE. 71(3): p. 351-355. March 1983*).

Madden et al. teach a method and system for tracking a radioactively labeled structure within the body, such as a tumor (Abstract, col. 8 lines 31-34), including multiple radioactive emission detectors capable of detecting Compton-scattered photons (col. 9 lines 5-7, col. 14 line 62-col. 15 line 7), a surface contour ("spectral line shape") input (co. 23 line 38-col. 24 line 4), a system for tracking the position of the

detectors (col. 9 lines 17-30), and a processor that calculates the position of the radioactively labeled body part using the surface contour input (col. 9 lines 58-61, col. 23 line 38-col. 24 line 4). The contour of Madden et al. constitute a “spatial” contour, as it “relates to space” as required by the common definition of the term (Merriam Webster). Madden et al. also include a variable collimator (col. 14 lines 22-32), which constitutes the claimed slit and eccentric collimators. Madden et al. additionally teach that the detected tumor position may be compared to other planar and three-dimensional images, wherein such comparison constitutes locating the radioactivity emitting source in a second system of coordinates as claimed (col. 31 lines 18-34).

Madden et al. do not teach means and steps for inputting a surface contour of a surface associated with the radioactively emitting source and processing the input for calculating the source position.

In the same field of endeavor, Bloch et al. teach a computerized system and method for delineating a surface contour of an area to be treated by radiation therapy, and for sending the contour to a processor to calculate the position of the area within the contour (Abstract, Fig. 2, p. 353). Bloch et al. teach that such delineation prior to application of therapy is useful for allowing a clinician to simulate various treatment approaches and subsequently pick the best option prior to performing the procedure (p. 353). It would have been obvious to a skilled artisan at the time of invention to have modified Madden et al. to include the surface contour means and steps of Bloch et al. and thereby achieve the claimed invention, in view of the teachings of Bloch et al.

Claims 1-8, 39, 62 and 77 are rejected under 35 U.S.C. 102(e) as being anticipated by Weinberg (US 6628984) in view of Madden et al., of record.

Weinberg discloses a system including a position sensor for determining the position and angulation for the detector in relation to a gamma ray emission source (col 2, lines 34- 36) as previously discussed. Weinberg does not explicitly disclose at least two detectors scanning a three dimensional surface which define body curvatures, while following contours of said three dimensional surface as now recited in claims 1 and 5. However, in the same field of endeavor. Madden et al. teach at least two detectors scanning a three dimensional surface which define body curvatures, while following contours of said three dimensional surface (col. 9 lines 58-61, col. 23 line 38-col. 24 line 4). It would have been obvious to a skilled artisan at the time of invention to have modified Weinberg to include the surface contour which define body curvatures and thereby achieve the claimed invention, in view of the teachings of Madden et al..

Claims 27, 38, 122, and 133 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weinberg in view of Madden et al., of record and in further view of Wainer et al. (US 5871013).

Weinberg in view of Madden et al., as discussed above, substantially discloses the invention as claimed including that a radiotracer is used, such as a tumor-seeking radiotracer. However, Weinberg fails to explicitly disclose the use of particular radiotracers. Wainer et al. also discloses a system and method for registration of nuclear medicine images including both functional and structural images and further

discloses the use of Tc99 (col 6, line 43) for acquiring images of the liver. It is well known in the medical imaging art that radiotracers may be chosen to target specific anatomic regions in the body. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Weinberg in view of Madden et al., in light of the teachings in the reference by Wainer et al. in order to acquire images of a specific target, namely the liver.

Claims 134, 140, 146-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weinberg in view of Madden et al., of record and in further view of Bennett, et al. (US Statutory Invention Registration H12).

Weinberg in view of Madden et al., as discussed above, substantially discloses the invention as claimed. Although Weinberg discloses the use of two cameras connected together by a cable, Weinberg does not explicitly disclose the use of a hinge, an articulated system of arms and joints.

Bennett et al. disclose an imaging system for a variety of studies and further discloses two cameras that are rotated and the position of the camera's angle is tracked (see fig. 8, abstract, col. 5, lines 58-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Weinberg in view of Madden et al., in light of the teachings in the reference by Bennett et al. to include the above discussed enhancements, because such improvement would improve resolution for certain clinical situations.

With respect to claims 135-139 and 141-145, Weinberg places the camera within a body cavity or to be used intraoperatively, so that one or many of the camera heads can be in a body cavity and other camera heads be outside the body cavity, or for all camera heads to be inside the body cavity as shown in figures 7-10, to derive a three dimensional representation of the lesion based on the integration of information from one area of interest to another (abstract, col. 2 lines 4-40).

Allowable Subject Matter

Claims 17, 23, 26, 28, 34, 37, 40, 46, 49, 63 and 72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN F. RAMIREZ whose telephone number is (571)272-8685. The examiner can normally be reached on (Mon-Fri) 7:00 - 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
Supervisory Patent Examiner, Art
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